Atty. Dkt. No. 200311960-1

AMENDMENTS TO THE SPECIFICATION

Please replace the title at page 1, line 1, with the following amended title:

COMPUTER IMPLEMENTED METHOD OF DETERMINING BOUNDS FOR MINIMUM COST

Please replace the paragraph at page 1, lines 4-6, with the following amended paragraph:

This application is related to U.S. Application Nos. 10/698,182, 10/698,264, and 10/698,265(Attorney Docket Nos. 200311961-1, 200311962-1 and 200312448-1), filed on Oct. 30, 2003(the same day as this application), the contents of which are hereby incorporated by reference.

Please replace the paragraph at page 14, lines 20-29, with the following amended paragraph:

The method of selecting the heuristic class 200 (figure 2) continues in a third step 206second step 204 of solving the general and specific integer programs. According to an embodiment, solving each of the general and specific integer programs comprises an instantiation of the method of determining the lower bound. The method of determining the lower bound of the present invention is discussed above and more fully below. According to an alternative embodiment, the third step 206second step 202 of solving the general and specific integer programs comprises an exact solution of the general or specific integer program. The alternative embodiment is less preferred because the exact solution is only available for a system configuration having a limited number of nodes.

Please replace the paragraph at page 14, line 30, to page 15, line 7, with the following amended paragraph:

The method of selecting the heuristic class 200 concludes in a fourth step 208third step 206 of selecting the heuristic class corresponding to the specific integer program if

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the specific lower bound for the replication cost of the heuristic class is within an allowable limit of the general lower bound. The allowable limit comprises a judgment made by an implementer depending upon such factors as the general lower bound (a lower general bound makes a larger allowable limit palatable), a cost of solving an additional specific integer program, and prior acceptable performance of the heuristic class modeled by the specific integer program. Typically, the implementer will be a system designer or system administrator who makes similar judgments as a matter of course in performing their tasks.

Please replace the paragraph at page 25, lines 21-24, with the following amended paragraph:

In fourth, fifth, or sixth steps, or fifth steps, 708, 710, or 712, or 710, the method 700 chooses the ranking technique, or the threshold technique, or the improvement technique, respectively. According to an alternative embodiment, the method 700 chooses the random technique. According to another alternative embodiment, the method 700600 chooses another approximation technique.

Please replace the paragraph at page 26, lines 16-25, with the following amended paragraph:

If the method 700 chooses the improvement technique in the sixth step 712, an initial placement of the k data objects on the n nodes within the metric scope has preferably been determined using the ranking or threshold technique. Alternatively, the initial placement of the k data objects on the n nodes within the metric scope is determined using the random technique. Alternatively, the initial placement of the k data objects on the n nodes within the metric scope is determined using another technique. Since the improvement technique begins with the initial placement of the k data objects placed on the n nodes, the improvement technique forms part of the multiphase technique where a first phase comprises the ranking, threshold, random, or other technique and where a second phase comprises the improvement technique.

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